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EXAMINER

DWIVEDI, MAHESH H

ART UNIT PAPER NUMBER

2168

DATE MAILED: 12/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/664,450	<b>Applicant(s)</b> DOGANATA ET AL.	
	<b>Examiner</b> Mahesh H. Dwivedi	<b>Art Unit</b> 2168	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 September 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/17/2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Information Disclosure Statement*

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

### *Specification*

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Claims 9-16 all recite a **"computer program on a computer useable medium"**. There is not any definition nor explanation in the specification of the instant application as to what type of medium is used to store the computer program, nor any explanation of the computer program itself.

### *Remarks*

3. The examiner notes that the claims are filled with numerous grammatical errors that render the claims incoherent. For example, claim 2 states "system of claim 2 including embedding the search query terms unsatisfied queries in the documents located by the enhanced queries". The examiner suggests that applicant closely look at each claim to fix the numerous grammatical errors to make the claims coherent.

### *Claim Objections*

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4. Claims 1 and 9 are objected to because of the following informalities: The phrase "one or more of **the** glossary" should be changed to "one or more of **a** glossary". Appropriate correction is required.

Claims 2-8 and 10-16 are objected to for incorporating the deficiencies of claims 1 and 9.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 6 recites the limitation "Query Analyzer module" in line 1. There is insufficient antecedent basis for this limitation in the claim, as claim 1 only recites a "query analyzer".

Claims 7-8 are rejected for incorporating the deficiencies of claim 6.

Claim 7 recites the limitation "Document Finder module" in line 9. There is insufficient antecedent basis for this limitation in the claim.

Claim 8 is rejected for incorporating the deficiencies of claim 7.

Claim 7 recites the limitation "the original textual index" in line 11. There is insufficient antecedent basis for this limitation in the claim.

Claim 8 is rejected for incorporating the deficiencies of claim 7.

Claim 8 recites the limitation "Index/Meta-data Enhancer module" in line 15. There is insufficient antecedent basis for this limitation in the claim.

Claim 15 recites the limitation "Query Analyzer module" in line 16. There is insufficient antecedent basis for this limitation in the claim, as claim 9 only recites a "query analyzer software module".

Claims 15-16 are rejected for incorporating the deficiencies of claim 6.

Claim 15 recites the limitation "Document Finder module" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

Claim 16 is rejected for incorporating the deficiencies of claim 15.

Claim 7 recites the limitation "the original textual index" in lines 3-4. There is insufficient antecedent basis for this limitation in the claim.

Claim 8 is rejected for incorporating the deficiencies of claim 7.

Claim 16 recites the limitation "Index/Meta-data Enhancer module" in lines 8-9. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-16 are rejected under 35 U.S.C. 102(b) as being anticipated by **Bowman et al.** (U.S. Patent 6,169,986).

9. Regarding claim 1, **Bowman** teaches a search system comprising:

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- A) a search system analog system that periodically looks through the search system log and identifies search queries that do not bring satisfactory results (Column 4, lines 53-65, Column 8, lines 40-44, Column 9, lines 66-67-Column 10, lines 1-12);
- B) a search query analyzer using one or more of the glossary, synonyms, known typographical errors and translated words to provide alternative query terms (Column 8, lines 17, Column 10, lines 65-67-Column 11, lines 1-23, Column 13, lines 17-26);
- C) relevant document finder based on enhanced queries including the alternative query terms to locate documents not found by the original search (Column 14, lines 26-43, Figure 9); and
- D) a linking enhanced query terms with the original search terms to reflect new keywords to be searched (Column 11, lines 6-23).

The examiner notes that **Bowman** teaches “**a search system analog system that periodically looks through the search system log and identifies search queries that do not bring satisfactory results**” as “the query term correlation date is regenerated periodically from recent query submissions, such as using the last M days of entries in a query log” (Column 4, lines 53-56), “the building of the query correlation table 137 consists of two primary phases: (1) generating daily log files, and (2) periodically parsing and processing these log files to generate the query correlation table 137” (Column 8, lines 40-44), and “generation process 136 parses the daily query log file in step 410 and extract successful multi-term queries. Ignoring the query submissions that produced a NULL query result (items\_found=0)” (Column 9, lines 66-67-Column 10, lines 1-2). The examiner notes that **Bowman** teaches “**a search query**

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**analyzer using one or more of the glossary, synonyms, known typographical errors and translated words to provide alternative query terms**” as “The search engine also preferably uses correlations between query terms to correct misspelled terms within search queries” (Column 8, lines 11-13) and “the selection process 139 selects the X terms with the highest values from the list, where X can be any desired number. In one embodiment, the selection process 139 chooses the top X related terms” (Column 13, lines 17-21). The examiner notes that **Bowman** teaches “**relevant document finder based on enhanced queries including the alternative query terms to locate documents not found by the original search**” as “a sample query result page 900 in which a user has performed a subject field search on the terms “OUTDOOR TRAIL” and has received a set of three related terms, each of which is incorporated into a respective hyperlink 910...in one embodiment, the query server 132 automatically selects the related term at the top of related terms list (such as the term “bike” in the FIG.9 example), and searches the query result to identify a subset of query result items that include this related term” (Column 14, lines 26-43). The examiner notes that **Bowman** teaches “**a linking enhanced query terms with the original search terms to reflect new keywords to be searched**” as “If the related term is found, its value is incremented. If the related term is not found, the generation process 136 adds the related term and assigns it a beginning value” (Column 11, lines 13-16).

Regarding claim 2, **Bowman** further teaches a search system comprising:

A) wherein the search queries are queries made by customers (Column 5, lines 7-12).

The examiner notes that **Bowman** teaches “**wherein the search queries are queries made by customers**” as “A preferred web-based implementation of the search refinement system...the system is described herein in the context of a search engine that is used to assist customers of Amazon.com Inc. in locating items (e.g., books, CDs, etc.) from an on-line catalogue of products” (Column 5, lines 7-12).

Regarding claim 3, **Bowman** further teaches a search system comprising:

A) embedding the search query terms unsatisfied queries in the documents located by the enhanced queries (Column 14, lines 26-43).

The examiner notes that **Bowman** teaches “**embedding the search query terms unsatisfied queries in the documents located by the enhanced queries**” as “a sample query result page 900 in which a user has performed a subject field search on the terms “OUTDOOR TRAIL” and has received a set of three related terms, each of which is incorporated into a respective hyperlink 910...in one embodiment, the query server 132 automatically selects the related term at the top of related terms list (such as the term “bike” in the FIG.9 example), and searches the query result to identify a subset of query result items that include this related term” (Column 14, lines 26-43).

Regarding claim 4, **Bowman** further teaches a search system comprising:

A) associated enhanced queries with the unsatisfactory queries in the search system log for use with further queries (Column 10, lines 65-67-Column 11, lines 1-23, Figure 5A).



The examiner notes that **Bowman** teaches “**associated enhanced queries with the unsatisfactory queries in the search system log for use with further queries**” as “For each key term 140 stored in the table 137A, there is a related terms list 142 such that each related term in the list is coupled with a prefix and a value 146 representing the correlation score... If the related term is found, its value is incremented. If the related term is not found, the generation process 136 adds the related term and assigns it a beginning value” (Column 10, lines 66-67-Column 11, lines 1-16).

Regarding claim 5, **Bowman** further teaches a search system comprising:

A) including ranking the results of searches using the enhanced queries (Column 8, lines 6-8, Column 14, lines 26-43, Figure 9).

The examiner notes that **Bowman** teaches “**including ranking the results of searches using the enhanced queries**” as “The disclosed search engine also preferably uses historical query submissions and item selections to rank query results for presentation to the user” (Column 10, lines 66-67-Column 11, lines 1-16) and “a sample query result page 900 in which a user has performed a subject field search on the terms “OUTDOOR TRAIL” and has received a set of three related terms, each of which is incorporated into a respective hyperlink 910...in one embodiment, the query server 132 automatically selects the related term at the top of related terms list (such as the term “bike” in the FIG.9 example), and searches the query result to identify a subset of query result items that include this related term” (Column 14, lines 26-43).

Regarding claim 6, **Bowman** further teaches a search system comprising:

- A) wherein Query Analyzer module comprises: a sub-module that identifies domain specific terms in a given query, using domain specific glossary (Column 13, lines 40-61);
- B) a sub-module that finds synonyms and related terms for the identified terms, using domain specific thesaurus (Figure 5A);
- C) a sub-module that finds other statistically close terms (Column 10, lines 66-67-Column 11, lines 1-16, Figure 5A); and
- D) a sub-module that identifies relevant domain specific categories for the identified terms, using domain specific ontology (Column 7, lines 20-31, Figure 5A).

The examiner notes that **Bowman** teaches “**wherein Query Analyzer module comprises: a sub-module that identifies domain specific terms in a given query, using domain specific glossary**” as “FIG. 8B illustrates the related term results for a multiple-term query in the subject field on “OUTDOOR TRAIL” using the mapping from FIG. 5B. The selection process 139 would look up key terms “S-OUTDOR” 560 and “S-TRAIL” 570 and see if they have any related terms in common. In the mapping, the related terms “S-BIKE,” “S-SPORTS,” and “S-VACATION” are found under the key terms “S\_-OUTDOOR” 560 and “S-TRAIL,” 570” (Column 13, lines 40-50). The examiner further notes that Figure 5A of **Bowman** clearly shows a list of related terms and synonyms. The examiner further notes that **Bowman** teaches “**a sub-module that finds other statistically close terms**” as “For each key term 140 stored in the table

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137A, there is a related terms list 142 such that each related term in the list is coupled with a prefix and a value 146 representing the correlation score... If the related term is found, its value is incremented. If the related term is not found, the generation process 136 adds the related term and assigns it a beginning value" (Column 10, lines 66-67-Column 11, lines 1-16). The examiner further notes that **Bowman** teaches "**a sub-module that identifies relevant domain specific categories for the identified terms, using domain specific ontology**" as "each related term and each key term 140 preferably includes a single-character field prefix which indicates the search filed 210, 220, 240 to which the term corresponds. These prefixes may, for example, be as follows: A=author, T-title, S-subject, R-artists, L-label, G-generic" (Column 7, lines 20-25). The examiner further notes that Figure 5A clearly shows different subjects to which related terms belong in.

Regarding claim 7, **Bowman** further teaches a search system comprising:

- A) wherein the Document Finder module comprises the following sub-modules: a sub-module that finds documents in the identified categories, using the original textual index (Column 11, lines 26-36, Figure 9); and
- B) a sub-module that filters the found documents to find additional relevant documents, based on the identified domain specific terms, synonyms, related terms, and statistically close terms (Column 14, lines 26-43, Figure 9).

The examiner notes that **Bowman** teaches "**wherein the Document Finder module comprises the following sub-modules: a sub-module that finds**

**documents in the identified categories, using the original textual index**” as “FIG. 9 illustrates a sample query result page 900 in which a user has performed a subject field search on the terms “OUTDOOR TRAIL” and has received a set of three related terms, each of which is incorporated into a respective hyperlink 910” (Column 14, lines 26-30). The examiner further notes that **Bowman** teaches “**a sub-module that filters the found documents to find additional relevant documents, based on the identified domain specific terms, synonyms, related terms, and statistically close terms**” as “a sample query result page 900 in which a user has performed a subject field search on the terms “OUTDOOR TRAIL” and has received a set of three related terms, each of which is incorporated into a respective hyperlink 910...in one embodiment, the query server 132 automatically selects the related term at the top of related terms list (such as the term “bike” in the FIG.9 example), and searches the query result to identify a subset of query result items that include this related term” (Column 14, lines 26-43).

Regarding claim 8, **Bowman** further teaches a search system comprising:

- A) wherein the Index/Meta-data Enhancer module comprises the following sub-modules: a sub-module that creates associations (links) between each found document and the given query (Figure 9); and
- B) a sub-module that adds new doc-query links to the meta-data of the corresponding textual index entries (Column 14, lines 26-43, Figure 9).

The examiner notes that Figure 9 of **Bowman** clearly shows links 910 and 920 for differing queries. The examiner notes that **Bowman** teaches “**a sub-module that**

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**adds new doc-query links to the meta-data of the corresponding textual index**

**entries**” as “The disclosed search engine also preferably uses historical query submissions and item selections to rank query results for presentation to the user” (Column 10, lines 66-67-Column 11, lines 1-16) and “a sample query result page 900 in which a user has performed a subject field search on the terms “OUTDOOR TRAIL” and has received a set of three related terms, each of which is incorporated into a respective hyperlink 910...in one embodiment, the query server 132 automatically selects the related term at the top of related terms list (such as the term “bike” in the FIG.9 example), and searches the query result to identify a subset of query result items that include this related term” (Column 14, lines 26-43).

Regarding claim 9, **Bowman** teaches a computer program comprising:

A) a search system analog system software module that periodically looks through the search system log and identifies search queries that do not bring satisfactory results (Column 4, lines 53-65, Column 8, lines 40-44, Column 9, lines 66-67-Column 10, lines 1-12);

B) a search query analyzer software module using one or more of the glossary, synonyms, known typographical errors and translated words to provide alternative query terms (Column 8, lines 17, Column 10, lines 65-67-Column 11, lines 1-23, Column 13, lines 17-26);

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- C) relevant document finder software module based on enhanced queries including the alternative query terms to locate documents not found by the original search (Column 14, lines 26-43, Figure 9); and
- D) a linking software module enhanced query terms with the original search terms to reflect new keywords to be searched (Column 11, lines 6-23).

The examiner notes that **Bowman** teaches “**a search system analog system software module that periodically looks through the search system log and identifies search queries that do not bring satisfactory results**” as “the query term correlation date is regenerated periodically from recent query submissions, such as using the last M days of entries in a query log” (Column 4, lines 53-56), “the building of the query correlation table 137 consists of two primary phases: (1) generating daily log files, and (2) periodically parsing and processing these log files to generate the query correlation table 137” (Column 8, lines 40-44), and “generation process 136 parses the daily query log file in step 410 and extract successful multi-term queries. Ignoring the query submissions that produced a NULL query result (items\_found=0)” (Column 9, lines 66-67-Column 10, lines 1-2). The examiner notes that **Bowman** teaches “**a search query analyzer software module using one or more of the glossary, synonyms, known typographical errors and translated words to provide alternative query terms**” as “The search engine also preferably uses correlations between query terms to correct misspelled terms within search queries” (Column 8, lines 11-13) and “the selection process 139 selects the X terms with the highest values from the list, where X can be any desired number. In one embodiment, the selection

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process 139 chooses the top X related terms" (Column 13, lines 17-21). The examiner notes that **Bowman** teaches "**relevant document finder software module based on enhanced queries including the alternative query terms to locate documents not found by the original search**" as "a sample query result page 900 in which a user has performed a subject field search on the terms "OUTDOOR TRAIL" and has received a set of three related terms, each of which is incorporated into a respective hyperlink 910...in one embodiment, the query server 132 automatically selects the related term at the top of related terms list (such as the term "bike" in the FIG.9 example), and searches the query result to identify a subset of query result items that include this related term" (Column 14, lines 26-43). The examiner notes that **Bowman** teaches "**a linking software module enhanced query terms with the original search terms to reflect new keywords to be searched**" as "If the related term is found, its value is incremented. If the related term is not found, the generation process 136 adds the related term and assigns it a beginning value" (Column 11, lines 13-16).

Regarding claim 10, **Bowman** further teaches a computer program comprising:

A) wherein the search queries are queries made by customers (Column 5, lines 7-12).

The examiner notes that **Bowman** teaches "**wherein the search queries are queries made by customers**" as "A preferred web-based implementation of the search refinement system...the system is described herein in the context of a search engine that is used to assist customers of Amazon.com Inc. in locating items (e.g., books, CDs, etc.) from an on-line catalogue of products" (Column 5, lines 7-12).

Regarding claim 11, **Bowman** further teaches a computer program comprising:

A) software for embedding the search query terms unsatisfied queries in the documents located by the enhanced queries (Column 14, lines 26-43).

The examiner notes that **Bowman** teaches “**software for embedding the search query terms unsatisfied queries in the documents located by the enhanced queries**” as “a sample query result page 900 in which a user has performed a subject field search on the terms “OUTDOOR TRAIL” and has received a set of three related terms, each of which is incorporated into a respective hyperlink 910...in one embodiment, the query server 132 automatically selects the related term at the top of related terms list (such as the term “bike” in the FIG.9 example), and searches the query result to identify a subset of query result items that include this related term” (Column 14, lines 26-43).

Regarding claim 12, **Bowman** further teaches a computer program comprising:

A) software for providing associated enhanced queries with the unsatisfactory queries in the search system log for use in connection with further customer queries (Column 10, lines 65-67-Column 11, lines 1-23, Figure 5A).

The examiner notes that **Bowman** teaches “**software for providing associated enhanced queries with the unsatisfactory queries in the search system log for use in connection with further customer queries**” as “For each key term 140 stored in the table 137A, there is a related terms list 142 such that each related term in the list



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is coupled with a prefix and a value 146 representing the correlation score... If the related term is found, its value is incremented. If the related term is not found, the generation process 136 adds the related term and assigns it a beginning value” (Column 10, lines 66-67-Column 11, lines 1-16).

Regarding claim 13, **Bowman** further teaches a computer program comprising:

A) software for ranking the results of searches in order of their per tenancy using the enhanced query terms as a ranking basis (Column 8, lines 6-8, Column 14, lines 26-43, Figure 9).

The examiner notes that **Bowman** teaches “**including ranking the results of searches using the enhanced queries**” as “The disclosed search engine also preferably uses historical query submissions and item selections to rank query results for presentation to the user” (Column 10, lines 66-67-Column 11, lines 1-16) and “a sample query result page 900 in which a user has performed a subject field search on the terms “OUTDOOR TRAIL” and has received a set of three related terms, each of which is incorporated into a respective hyperlink 910...in one embodiment, the query server 132 automatically selects the related term at the top of related terms list (such as the term “bike” in the FIG.9 example), and searches the query result to identify a subset of query result items that include this related term” (Column 14, lines 26-43).

Regarding claim 14, **Bowman** further teaches a computer program comprising:

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- A) wherein Query Analyzer module comprises: a software sub-module that identifies domain specific terms in a given query, using domain specific glossary (Column 13, lines 40-61);
- B) a software sub-module that finds synonyms and related terms for the identified terms, using domain specific thesaurus (Figure 5A);
- C) a software sub-module that finds other statistically close terms (Column 10, lines 66-67-Column 11, lines 1-16, Figure 5A); and
- D) a software sub-module that identifies relevant domain specific categories for the identified terms, using domain specific ontology (Column 7, lines 20-31, Figure 5A).

The examiner notes that **Bowman** teaches “**wherein Query Analyzer module comprises: a software sub-module that identifies domain specific terms in a given query, using domain specific glossary**” as “FIG. 8B illustrates the related term results for a multiple-term query in the subject field on “OUTDOOR TRAIL” using the mapping from FIG. 5B. The selection process 139 would look up key terms “S-OUTDOR” 560 and “S-TRAIL” 570 and see if they have any related terms in common. In the mapping, the related terms “S-BIKE,” “S-SPORTS,” and “S-VACATION” are found under the key terms “S\_-OUTDOOR” 560 and “S-TRAIL,” 570” (Column 13, lines 40-50). The examiner further notes that Figure 5A of **Bowman** clearly shows a list of related terms and synonyms. The examiner further notes that **Bowman** teaches “**a software sub-module that finds other statistically close terms**” as “For each key term 140 stored in the table 137A, there is a related terms list 142 such that each related term in the list is coupled with a prefix and a value 146 representing the

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correlation score... If the related term is found, its value is incremented. If the related term is not found, the generation process 136 adds the related term and assigns it a beginning value" (Column 10, lines 66-67-Column 11, lines 1-16). The examiner further notes that **Bowman** teaches "**a software sub-module that identifies relevant domain specific categories for the identified terms, using domain specific ontology**" as "each related term and each key term 140 preferably includes a single-character field prefix which indicates the search filed 210, 220, 240 to which the term corresponds. These prefixes may, for example, be as follows: A=author, T=title, S=subject, R-artists, L-label, G-generic" (Column 7, lines 20-25). The examiner further notes that Figure 5A clearly shows different subjects to which related terms belong in.

Regarding claim 15, **Bowman** further teaches a computer program comprising:

- A) wherein the Document Finder module comprises the following software sub-modules: a software sub-module that finds documents in the identified categories, using the original textual index (Column 11, lines 26-36, Figure 9); and
- B) a software sub-module that filters the found documents to find additional relevant documents, based on the identified domain specific terms, synonyms, related terms, and statistically close terms (Column 14, lines 26-43, Figure 9).

The examiner notes that **Bowman** teaches "**wherein the Document Finder module comprises the following software sub-modules: a software sub-module that finds documents in the identified categories, using the original textual index**" as "FIG. 9 illustrates a sample query result page 900 in which a user has performed a

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subject field search on the terms "OUTDOOR TRAIL" and has received a set of three related terms, each of which is incorporated into a respective hyperlink 910" (Column 14, lines 26-30). The examiner further notes that **Bowman** teaches "**a software sub-module that filters the found documents to find additional relevant documents, based on the identified domain specific terms, synonyms, related terms, and statistically close terms**" as "a sample query result page 900 in which a user has performed a subject field search on the terms "OUTDOOR TRAIL" and has received a set of three related terms, each of which is incorporated into a respective hyperlink 910...in one embodiment, the query server 132 automatically selects the related term at the top of related terms list (such as the term "bike" in the FIG.9 example), and searches the query result to identify a subset of query result items that include this related term" (Column 14, lines 26-43).

Regarding claim 16, **Bowman** further teaches a computer program comprising:

- A) wherein the Index/Meta-data Enhancer module comprises the following sub-modules: a software sub-module that creates associations (links) between each found document and the given query (Figure 9); and
- B) a software sub-module that adds new doc-query links to the meta-data of the corresponding textual index entries (Column 14, lines 26-43, Figure 9).

The examiner notes that Figure 9 of **Bowman** clearly shows links 910 and 920 for differing queries. The examiner notes that **Bowman** teaches "**a software sub-module that adds new doc-query links to the meta-data of the corresponding**

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**textual index entries**" as "The disclosed search engine also preferably uses historical query submissions and item selections to rank query results for presentation to the user" (Column 10, lines 66-67-Column 11, lines 1-16) and "a sample query result page 900 in which a user has performed a subject field search on the terms "OUTDOOR TRAIL" and has received a set of three related terms, each of which is incorporated into a respective hyperlink 910...in one embodiment, the query server 132 automatically selects the related term at the top of related terms list (such as the term "bike" in the FIG.9 example), and searches the query result to identify a subset of query result items that include this related term" (Column 14, lines 26-43).

### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. PGPUB 2005/0065773 issued to **Huang et al.** on 24 March 2005. The subject matter disclosed therein is pertinent to that of claims 1-26 (e.g., methods to use query logs to improve user query output).

U.S. PGPUB 2004/0254920 issued to **Brill et al.** on 16 December 2004. The subject matter disclosed therein is pertinent to that of claims 1-26 (e.g., methods to use query logs to improve user query output).

U.S. Patent 7,051,023 issued to **Kapur et al.** on 23 May 2006. The subject matter disclosed therein is pertinent to that of claims 1-26 (e.g., methods to use query logs to improve user query output).

U.S. Patent 6,772,150 issued to **Whitman et al.** on 03 August 2004. The subject matter disclosed therein is pertinent to that of claims 1-26 (e.g., methods to use query logs to improve user query output).

U.S. Patent 7,136,845 issued to **Chandrasekar et al.** on 14 November 2006. The subject matter disclosed therein is pertinent to that of claims 1-26 (e.g., methods to use query logs to improve user query output).

Article entitled "An Advanced Enterprise Information Search and Delivery System: Fulfilling IBM's one-Web vision" by **Doganata et al.**, dated 14 October 2002. The subject matter disclosed therein is pertinent to that of claims 1-26 (e.g., methods to use query logs to improve user query output).

### ***Contact Information***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mahesh Dwivedi whose telephone number is (571) 272-2731. The examiner can normally be reached on Monday to Friday 8:20 am – 4:40 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Vo can be reached (571) 272-3642. The fax number for the organization where this application or proceeding is assigned is (571) 273-8300.

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Art Unit 2168

  
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